1.	An adapter for removable attachment to a PDA, the adap	ter comprising
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- (a) an interface connector configured to removably electrically couple with the PDA;
  - a micro controller electrically coupled with the interface connector;
  - (c) a light source configured to emit a light beam; and
  - (d) a photo detector electrically coupled to the micro controller.

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2. An adapter as recited in claim 1, wherein light source is a laser.

An adapter as recited in claim 1, further comprising means electrically coupled to the micro controller for converting electrical signals between analog and digital.

An adapter as recited in claim 2, wherein the light source and the photo detector are configured such that the light beam from the light source can be reflected off a bar code and received by the photo detector.

An adapter as recited in claim X, further comprising means for converting the light beam from the light source into a digital signal.

An adapter as recited in claim 3, wherein the means for converting the light beam comprises switching circuitry for turning the light source on and off.



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An adapter as recited in claim \$\mathcal{f}\$, wherein the means for converting the light beam comprises an LCD positioned in the path of the light beam, the LCD being operable between an on position which blocks the light beam and an off position which allows the light to pass therethrough.

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8.	An electrical	l apparatus	comprising
٠.	. III Olooulou	appulatus	OTTE

- (a) a PDA comprising a low profile box shaped case having a front face extending between a top end and a bottom end, a display screen is positioned on the front face and a first interface connector is positioned at the bottom end, the case of the PDA anclosing a microprocessor;
  - (b) an adapter comprising:
  - (i) a substantially L-shaped housing comprising a base and an arm, the arm projecting from the base to a free end;
  - (ii) a second interface connector mounted to the base of the housing, the second interface connector being configured to electrically couple with the first interface connector for transferring electrical signals therebetween;
  - (iii) means for removably coupling the housing of the adapter to the PDA such that the first and second interface connectors are electrically coupled and the free end/of the arm is positioned at the top end of the PDA boasing;
  - (iv) a light source at least partially disposed within the arm and configured to emanate a light beam through the free end thereof;
  - (v) a photo detector at least partially positioned at the free end of the arm; and
  - (vi) an analog to digital converter disposed within the housing and electrically coupled to the photo detector.

An electrical apparatus as recited in claim %, wherein a micro processor is disposed within the adapter housing and is electrically coupled with the analog to digital converter.

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16.	An electrical apparatus as recited in	claim 8, wherein the adapter housing
comprises a b	eattery compartment.	
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M.	An electrical apparatus as recited in	claim,8, wherein the light source is a
aser.		
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12.	An electrical apparatus as recited in cla	nim //, wherein the laser emits a visible
ed light that	is sufficiently collimated to function as	s a pointer.
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18.	An electrical apparatus as recited in	claim %, wherein the adapter further
comprises a n	nanual button for turning the light sour	ce on and off.
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JA.	An electrical apparatus as recited in cl	aim , wherein the light source and the
ohoto detector	r are configured such that the light beam	from the light source can be reflected
		· ·

irce and the e reflected off a bar code and received by the photo detector.

An electrical apparatus as recited in claim &, further comprising an LCD positioned in the path of the light emitting from the light source, the LCD being operable between an on position which block light from passing therethrough and an off position which allows light to pass therethrough.

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## A PDA comprising:

- a housing having a front face extending between a top end and an opposing bottom end, a display screen is positioned on the front face and an interface connector is positioned at the bottom end,
- (b) a micro controller is disposed within the housing and is electrically coupled to the connector;
- a laser is disposed within the housing and is configured to emit a light (c) beam through the top end of the housing;
- a analog to digital converter is disposed within the housing and is electrically coupled with the micro controller;
- (e) a photo detector is positioned at the top end of the housing and is configured to receive reflected light from the laser.

A PDA as recited in claim 16, further comprising means for converting light from the laser into a digital signal.

A PDA as recited in claim 16, wherein the laser emits a visible red light that is sufficiently collimated to function as a pointer.